22 July 2015 - The last of a current series of weather satellites was successfully launched into an orbit tens of thousands of miles above the equator last week.

Launched from Kourou in French Guyana, the satellite is currently called MSG-4 but will be renamed Meteosat-11 when it is declared operational.

It is the fourth and final of EUMETSAT's second generation satellites which have already been providing invaluable data to weather forecasters since 2002.

The Meteosat satellites are placed in a special 'geostationary' orbit approximately 36000km above the equator.

At this height, the period of the orbit matches the rotation of the Earth, so the satellites appear stationary in the sky (this is also the orbit used my many communications and broadcast satellites, and is the reason that satellite TV dishes can point in a fixed direction).

Geostationary satellite imagery is essential to forecasters as it provides a unique view of the world from a fixed location, providing rapidly updated imagery that enables forecasters to track the movement of the atmosphere and monitor weather features that can change rapidly, such as localised severe weather events.

The data from satellites helps to not only monitor current weather, but also to assess the accuracy of forecasts from computers so they can be fine tuned. They also provide important data for monitoring the global climate.

MSG-4 has been launched early and isn't due to become operational for at least a year. This is because all four of the second generation satellites were built at the same time to be cost effective.

As MSG-4 is the last, it has been decided to 'store' it in orbit to ensure it's in pristine condition when it's needed to go operational.

When it does go into service, it will provide vital data while the next generation of satellites is developed. The first of these is likely to be launched in 2019 and will extend the Meteosat Series until at least the late 2030s.

The MSG satellite series is the result of the successful international cooperation with EUMETSAT and the European Space Agency (ESA). For more than 30 years, Meteosat satellites have been providing a continuous and reliable stream of data to Europe's weather services and other users.

Meteosat's Second Generation (MSG) series of satellites has been highly successful, with all the satellites performing beyond their designed lifetimes.

EUMETSAT is an intergovernmental organisation dedicated to the operation and exploitation of meteorological satellites. UK representation at EUMETSAT has been lead by the Met Office since EUMETSAT was first established in 1986. EUMETSAT now has 30 Member States, and its headquarters are located in Darmstadt, Germany.

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